

## CHAPTER 13

### PROTECTION OF THE PUBLIC

#### SIFC-1301.0 SITE FENCING

The requirements of this section shall apply to all construction sites. Fencing shall be installed prior to the excavation for footings or underground utilities.

The **General Contractor (GC)** shall install construction site fencing for protection of the public:

- Every construction operation shall be enclosed with a non-climbable fence not less than six feet high. The **GC** shall have the option of fencing the total perimeter of a construction site or an area within a minimum of twenty feet away from the structure. The *Special Inspections Engineer of Record (SIER)* shall notify the **FCCSS** if a construction fence is not installed.
- The criteria outlined above may be modified by the **FCCSS** Supervisor when a natural barrier surrounding a construction site exists. The **GC** shall submit a request for such modification in writing prior to excavation.
- Prior to excavation, any impact barriers required for projects located in close proximity to a public use roadway shall be installed according to the Virginia Department of Transportation (VDOT) Road and Bridge Standards.

#### SIFC-1302.0 VIRGINIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

The **General Contractor (GC)** shall ensure that the construction site is safe and in compliance with all applicable VOSHA regulations. A copy of the "Virginia Occupational Safety and Health Standards for the Construction Industry" (29 CFR Part 1926) shall be available on the construction site at all times.

#### SIFC-1303.0 CONSTRUCTION SAFETY FOR MASONRY WALLS

Masonry construction shall comply with applicable VOSHA regulations, including:

- Limited Access Zone:** A limited access zone shall be established whenever a masonry wall is being constructed. Entry to the zone shall be limited to employees actively engaged in constructing the wall. No other persons shall be permitted to enter the zone.
  - **Zone Location and Extent:** The zone shall be established prior to the start of construction of the wall, on the side of the wall which will be unscaffolded. The zone shall be equal to the height of the wall to be constructed plus four feet, and shall run the entire length of the wall.

- **Zone Duration:** The zone shall remain in place until the wall is laterally supported to prevent overturning and collapse, either by construction bracing or adequate permanent supporting elements of the structure.
- b. **Bracing of Walls:** All masonry walls over eight feet in height shall be laterally braced to prevent overturning and collapse unless the wall has adequate permanent lateral support. Construction bracing shall be erected as soon as masonry construction exceeds eight feet in height. The bracing shall remain in place until permanent supporting elements of the structure are in place.

## SIFC-1304.0 TOWER CRANES

### 1304.1 General

- a. **Scope:** The requirements of this section shall apply whenever a tower crane is to be erected on-site. The **Crane Supplier** and **General Contractor (GC)** are responsible for safe installation and use of the crane and construction methods. The **Structural Engineer of Record (SER)** is responsible for the structural design strength of the building to support the loads imposed on it by the crane.
- b. **Permits:** A separate building permit is not required for a tower crane and/or its foundation. An electrical permit is required for a tower crane.

### 1304.2 Documents

*Construction documents and fabrication and erection documents* for the crane and the crane foundation shall be prepared by **Registered Design Professionals**. Prior to the placement of the crane foundation, the **Crane Owner, Crane Contractor**, or the **GC** shall submit one copy of the following information to the **FCCSS** for record purposes:

- a. **Crane Specifications:** Crane specifications including manufacturer's operating model number, hook height, boom length, and manufacturer's specifications relative to overturn moment, slewing moment, vertical load (minimum and maximum), shear per bolt group, uplift per bolt group, compression per corner and horizontal shear (minimum and maximum).
- b. **Foundations:** *Fabrication and erection documents* shall include structural calculations and design of crane foundations. Plans and calculations shall clearly indicate footing dimensions, required compressive strength of concrete, steel reinforcement, and allowable soil bearing pressure. The allowable soil bearing pressure shall be consistent with values shown in the soil test report for the project prepared by the **Geotechnical Engineer of Record (GER)**.
- c. **Concrete Mix:** Concrete mix design indicating review and approval by the **Registered Design Professional** responsible for design of crane foundations.

- d. **Location:** *Fabrication and erection documents* shall include the crane location and boom swing.
- e. **Tower Cranes Within the Structure:** For cranes located within or supported by the structure, the *fabrication and erection documents* shall indicate the service loads to be delivered to or imposed on the structure, and the proposed method of support. Such *construction documents* shall be reviewed and approved by the **Structural Engineer of Record (SER)**.

### 1304.3 Inspections

**1304.3.1 Crane Foundation:** The **SIER** shall conduct crane foundation inspections. Soil and crane footing inspections shall be in accordance with Chapters 7 and 11 of this Special Inspections Document, with inspection reports to **FCCSS** addressing soil bearing capacity, footing construction, and concrete tests. Upon completion of the crane foundation the **SIER** shall, after review and approval by the appropriate **Registered Design Professionals**, submit a *Completion Letter* to **FCCSS** and shall indicate the date of completion on the *Final Report of Special Inspections*.

### 1304.3.2 Tower Crane Erection

- a. **Components:** Prior to crane erection, the crane base, tower sections, jib and counter jib shall be inspected for structural defects by the **Crane Manufacturer** or a **Registered Design Professional**.
- b. **Assembly:** The crane shall be assembled according to the manufacturer's specifications. All bolts shall be secured in accordance with manufacturer's project specifications, and shall be inspected by the **GC** at erection, thirty days after erection and every ninety days thereafter.

**1304.3.3 Electrical Inspection:** An electrical permit shall be obtained and an inspection by a **Fairfax County Electrical Inspector** shall be performed and approved prior to use of the crane.

**1304.3.4 Completion of Crane Installation:** The **GC** shall, after review and approval by the appropriate **Registered Design Professionals**, submit a letter of completion of crane installation to **FCCSS**.

### 1304.4 Safety Rules and Regulations

Virginia Occupational Health and Safety Administration (VOSHA) regulations in Subpart N - Section 1926.550, Subpart N - Section 1926.552 and Subpart Q - Section 1926.700 shall also apply to tower cranes. The **FCCSS** Inspector can require a load test at any time.

